

REMARKS

Claims 1-3, 6-10, 12-13, 16-27, 29-30, and 33-39 are currently pending in the application. In this response, claims 4-5, 11, 14-15, 28, 31, and 32 have been cancelled, claims 1, 12, and 19 have been amended, and new claims 34-39 have been added. No new matter has been added. Examination of the pending claims in view of the foregoing amendment and ensuing remarks is respectfully requested.

Initially, applicant wishes to thank the Examiner for a May 13, 2010 telephone interview. During the interview, claims 1, 19, and 34 and U.S. Patent No. 6,574,504 filed by Mazaury et al. ("Mazaury") were discussed.

Rejection of claims under 35 U.S.C. § 103

Claims 1-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mazaury. Applicant respectfully submits that Mazaury does not teach or suggest multiple features of the subject matter claimed in claims 1-33 as presently amended.

As amended, independent claim 1 includes a coil having electrical connectivity at both ends to allow unidirectional flow of current. Support for this feature is present at least in Figure 5, which shows the coil 28 electrically connected to both Vcc 30 and Ground 32 to allow unidirectional flow of current (i.e., direct current) from Vcc 30 to Ground 32 when the switch 26 is closed. Conversely, Mazaury discloses an antenna, which has electrical connectivity at only one end, and allows an alternating current to flow through the antenna when a voltage is applied to the one connected end.

Independent claim 1 also includes an active electromagnetic field portion including an electromagnetic field packet having a plurality of successive generally rectangular electromagnetic field pulses. Those skilled in the art will readily recognize that the antenna disclosed in Mazaury would not be operative to produce generally rectangular electromagnetic field pulses. That is, an antenna operates by producing an alternating current that resonates up and down the antenna to produce a sinusoidal waveform at a frequency that is generally defined by the physical properties of the antenna itself. In contrast, the electromagnetic signal pulses generated by the coil recited in claim 1 may be varied simply by differing the frequency at which the coil is

energized and de-energized. In this regard, the coil recited in claim 1 is operative to produce a generally rectangular waveform by providing a unidirectional flow of current to the coil (e.g., by closing a switch), which generates a magnetic flux, followed by removal of the direct current energy (e.g., by opening a switch) to remove the magnetic flux. That is, there is a period of constant magnetic flux in the center of each pulse, rather than a series of sinusoidal waves as disclosed in Mazaury.

Claim 1 also includes electromagnetic field pulses having a duration of between 25 μ s and 100 ms delivered at a frequency of between 1 Hz and 100 Hz. Conversely, Mazaury discloses a 10 MHz, sinusoidal emission signal that is applied for a time period (e.g., 1/2 hour), wherein the 10 MHz emission signal is applied as a series of 0.625 ms impulses that are spaced apart by 0.625 ms periods. See Example 6 of Mazaury. Thus, for each 0.625 ms wave impulse, there are actually 6250 sinusoidal oscillations, whereas the electromagnetic field pulses recited in claim 1 are each a single, generally rectangular-shaped pulse. Further, one skilled in the art would recognize that the antenna and system disclosed in Mazaury cannot, by its nature, operate at a frequency of between 1 Hz and 100 Hz. In fact, Mazaury discloses the system as operating at a frequency of between 1 MHz and 300 MHz. See col. 1, lines 57-60 of Mazaury.

Claim 1 also recites that the duration of the inactive field portion is longer than the duration of the electromagnetic field packet. The Examiner maintains the assertion that when not in use, the device disclosed in Mazaury is “inactive,” such that the “active” portion in Mazaury is the treatment time (e.g., 30 minutes), and the “inactive” portion is the time between treatments (e.g., two days). Applicant respectfully submits that this interpretation of Mazaury is overly broad, and that one skilled in the art would recognize that, to the extent Mazaury includes an “inactive field portion,” the duration between impulses is the same duration as the impulses themselves (i.e., 0.625 ms). See Example 6 of Mazaury. The timing of the active and inactive electromagnetic field portions of claim 1 are controlled by a control device arranged to control the field generating device to alternately produce these field portions. Accordingly, the inactive electromagnetic field portion occurs during normal operation of the apparatus, and should not be construed to include time periods when the entire apparatus is not in use. The specification at paragraphs 42-43 provides an example wherein a control device

controls a field generating device to alternately produce inactive electromagnetic field portions that are 15 times greater than the time duration of each active electromagnetic field portion, which would provide an inactive electromagnetic field portion on the order of seconds (e.g., 1 second, 60 seconds, or the like).

Accordingly, as the disclosure of Mazaury simply does not teach or suggest several limitations present in claim 1, Applicant respectfully asserts that claim 1 and its dependent claims are patentable over Mazaury, and requests that this rejection be withdrawn.

Amended independent claim 19 is a method of transdermally delivering therapeutic substances and includes limitations similar to those in claim 1. Claim 19 and its dependent claims are believed to be patentable over Mazaury for at least the same reasons presented above with regard to claim 1.

New claims

Applicant has added new claims 34 and 35, which are believed to be patentable over Mazaury for at least the reasons set forth above in relation to claims 1-33.

Applicant has also added new claims 36-39, which each depend from one of independent claims 1, 19, and 34. Claims 36-39 are believed to be allowable as being dependent on allowable base claims for at least the reasons provided above.

Conclusion

Commissioner is hereby authorized to charge the required fee for the filing of the RCE and for extending the period of time for response to Deposit Account No. 04-0258 of Davis Wright Tremaine LLP. If additional fees are believed necessary, the Commissioner is further authorized to charge any deficiency or credit any overpayment to Deposit Account No. 04-0258.

All of the claims remaining in the application are now believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

If questions remain regarding this application, the Examiner is invited to contact the undersigned at (206) 757-8133.

Respectfully submitted,
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